

Message

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Sent: 2/24/2021 6:21:01 PM
To: Prashant Gupta (prashant.gupta@honeywell.com) [prashant.gupta@honeywell.com]; Kirk Kessler [kkessler@montrose-env.com]
Subject: State comments on the BRA Memo

Prashant and Kirk,

Please see the table below with follow ups on the EPD comments. I do not see any major issues that cannot be addressed by adding details to the already existing responses. Please let me know if you see any issues that need to be discussed with GEPD. As we agreed to conduct additional sampling in the areas of the CBA with less than 24" of soil cover to address the surface soil issue that also needs to be worked into the responses to GEPD.

Also, I will be adjusting the EPA comments to request the agreed to sampling rather than the inclusion of soil data outside of the CBA. I will hold off on sending the official comments (including GEPD's) until I hear back from you on the EPD responses below.

Original EPD Comment Provided by EPA to LCP Chemicals in Letter Dated January 8, 2021	LCP Chemicals Response	EPD Response
<p>Section 3.2.2: CBA Subsurface This Section mentions that a mixed soil depth of 0-5 feet below ground surface (ft bgs) will be evaluated. Since there are more detections from 2-5 ft bgs than in the 0-2 ft bgs interval, there is a concern that combining surface soil and subsurface soil to evaluate mixed soil will dilute the mixed soil exposure point concentration (EPC). Section 2.21 of EPA's <i>Region 4 Human Health Risk Assessment Supplemental Guidance</i> [R4HHRA]^[1] indicates that surface and subsurface soil (which Region 4 typically considers to be "from the bottom of the defined depth of surface soil up to 10 feet below land surface") should be evaluated as separate media. Please justify evaluating mixed soil and/or provide correspondence where this was previously approved by EPA and/or EPD. If not, please evaluate surface and subsurface soil as separate media in the HHBRA.</p>	<p>The soil data will be treated the same as it was in the approved OU3 HHBRA. Specifically, surface soil is the 0-2 ft-bgs interval and mixed soil for the Excavation Worker is the 0-5 ft-bgs interval. A 0-5 ft-bgs interval is appropriate for an Excavation Worker as they would be exposed to soil within this entire interval, not just the 2-5 ft-bgs interval.</p>	<p>Given that soil was treated in the same manner in the approved OU3 HHBRA and the fact that EPA Region 4 did not have any direct objections to the definition of mixed soil in the January 8, 2021 Letter, LCP's response is acceptable and 0-5 ft bgs can be used to represent "mixed soil" for an Excavation Worker.</p>

^[1] [R4HHRA] = United States, United States Environmental Protection Agency, EPA Region 4 Scientific Support Section, Superfund Division. (2018, March). *Region 4 Human Health Risk Assessment Supplemental Guidance*. Retrieved from https://www.epa.gov/sites/production/files/2018-03/documents/hhra_regional_supplemental_guidance_report-march-2018_update.pdf

<p>Section 3.4: Uncertainty Evaluation for COPCs</p> <p>The Memo mentions that a “<i>designation of Potential COPC (“PCOPC”) is given to constituents that were not detected, but had more than 5% of detection limits greater than the screening level</i>”. The designation of “PCOPCs” does not conform to the recommended constituent of potential concern (COPC) selection procedures outlined in Section 2.6 of EPA’s <i>Region 4 Human Health Risk Assessment Supplemental Guidance</i> [R4HHRA]^[2]. Also, since the HHBRA indicates that PCOPCs will be evaluated in the risk assessment, referring to constituents as PCOPCs adds unnecessary confusion given that the term “COPCs” already refers to all constituents that are further evaluated in a risk assessment. To address this Comment, please label all PCOPCs as COPCs and evaluate all COPCs in the risk assessment.</p>	<p>The COPC tables have been revised and are included in Attachment B where the designation has been changed from PCOPC to qualitative COPCs to be consistent with the OU3 HHBRA.</p>	<p>The original comment is appropriately addressed.</p>
<p>Section 4.6: Exposure Parameters</p> <p>The Memo indicates that central tendency exposure (CTE) will be evaluated in the HHBRA along with reasonable maximum exposure (RME). Since remedial decisions will only be made on RME, it is recommended that the CTE evaluation not be included in the HHBRA to reduce any confusion that may result. If the HHBRA will include a CTE evaluation, please place the evaluation into a separate section and explicitly mention in the text that remedial decisions will only be made based on RME.</p>	<p>A CTE evaluation is standard practice in superfund site risk assessments and furthermore, it was conducted in the OU3 HHBRA. Thus, we respectfully request its inclusion in the OU2/CBA risk assessment for sake of completeness and consistency with OU3.</p>	<p>After further consideration of the response from LCP Chemicals, the CTE evaluation can remain in the OU2 HHBRA. However, it is recommended that the OU2 HHBRA explicitly state that remedial decisions will only be made based on RME.</p>
<p>Section 4.7.3: Groundwater EPC</p> <p>There are concerns with the proposed approach for determining groundwater exposure point concentrations (EPCs). The RPs correctly cites EPA’s <i>Determining Groundwater Exposure Point</i></p>	<p>It is unclear what the comment desires in terms of providing “additional information” in the Tech Memo. We speculate the reviewer desires an evaluation of the existing site characterization data set in order to derive to region of the ‘plume core’, a concept which lacks a precise definition. A site such as LCP with a complex and geographically-diverse groundwater COC condition does not lend itself to the concept of a ‘plume core’. Thus, we propose to use a cumulative point (well) risk analysis to identify the area (separate assessments will be done for the</p>	<p>Based on the response from LCP Chemicals, it appears that sufficient information is not available to characterize the core of the plume in accordance with [GWEPC]. Thus, please use the greater of the maximum detected groundwater concentration or maximum groundwater reporting limit as the groundwater EPC.</p> <p>The response also does not address the concerns made in the original comment about aggregating four years of groundwater sampling results. Please add additional information in the HHBRA to address these concerns.</p>

^[2] [R4HHRA] = United States, United States Environmental Protection Agency, EPA Region 4 Scientific Support Section, Superfund Division. (2018, March). *Region 4 Human Health Risk Assessment Supplemental Guidance*. Retrieved from https://www.epa.gov/sites/production/files/2018-03/documents/hhra_regional_supplemental_guidance_report-march-2018_update.pdf

<p><i>Concentrations</i> [GWEPC]^[3] when stating that EPCs should be calculated using data from groundwater wells located within the core of the plume. However, page 6 of [GWEPC] also states that “assessors need adequate characterization of the entire plume to be able to identify the core of the plume”. Section 4.7.3 does not discuss if and how the plume will be characterized. Also, Section 4.2.1 of the Memo states that there is contaminant leakage from the Satilla Formation into the Ebenezer Formation and that the latter Formation has a high degree of concentration attenuation. If so, it may not be appropriate to aggregate four years of sampling results since older results may not represent current site conditions. Please address these concerns by providing additional information in the Section. Please note that if site and data considerations preclude deriving a groundwater EPC based on the upper confidence limit of the arithmetic mean (i.e. 95% UCL), [GWEPC] provides for using the maximum detected concentration as the EPC.</p>	<p>Satilla Fm and Ebenezer Fm zones) posing the highest risk, from which a group of wells will be identified to quantify the EPCs.</p>	
<p>Tables 3 and 4: Cell Building Area (CBA) Soil COPCs Selection</p> <p>The Tables show that for both semi-volatile organic compounds (SVOCs) and volatile organic compounds (VOCs), there is only 1 surface soil sample and generally less than 5 mixed soil samples. This is not sufficient characterization of SVOCs and VOCs and is of concern given that several SVOCs and VOCs are being eliminated as COPCs based on the results of one sample. Section 4.2.2 indicates that polycyclic aromatic hydrocarbons (PAHs) are “ubiquitous throughout the CBA study area” and that there is a “probable petroleum smear zone caused by historical water table fluctuation” which indicates that both SVOCs and VOCs are of concern at the CBA. To ensure that there is enough information to adequately characterize the risks from SVOCs and VOCs exposure in soil, please provide a plan for further characterization (e.g. collecting more samples) of soil SVOCs and VOCs.</p>	<p>As described above, the appropriate depths of historical samples have been re-adjusted to reflect the current condition. This is discussed more fully in Attachment A. Revised COPC tables are included in Attachment B. Using this dataset, additional sampling is not necessary as there is sufficient data for conducting the HHBRA. PAHs were analyzed in 13 samples and most other SVOCs and VOCs were analyzed in 9 or more samples.</p>	<p>The original comment will consider having been appropriately addressed only on the condition that EPA Region 4 concurs with EPA General Comment #3 and #4.</p>

^[3] [GWEPC] = United States, United States Environmental Protection Agency, Office of Solid Waste and Emergency Response. (2014, February). *Memorandum for Determining Groundwater Exposure Point Concentrations, Supplemental Guidance* (OSWER Directive 9283.1-42). Retrieved from <https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=236917>

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Sincerely,

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